

## § 1045.30

of conformity issued under 40 CFR part 1060.

(c) Fuel lines intended to be used with new engines and new portable marine fuel tanks must be certified to the applicable requirements of 40 CFR part 1060. Similarly, fuel tanks intended to be used with new engines must be certified to the applicable requirements of 40 CFR part 1060.

(d) All persons installing engines certified under this part 1045 must follow the certifying manufacturer's emission-related installation instructions (see § 1045.130 and 40 CFR 1068.105).

### § 1045.30 Submission of information.

(a) This part includes various requirements to record data or other information. Refer to § 1045.825 and 40 CFR 1068.25 regarding recordkeeping requirements. If recordkeeping requirements are not specified, store these records in any format and on any media and keep them readily available for one year after you send an associated application for certification, or one year after you generate the data if they do not support an application for certification. You must promptly send us organized, written records in English if we ask for them. We may review them at any time.

(b) The regulations in § 1045.255 and 40 CFR 1068.101 describe your obligation to report truthful and complete information and the consequences of failing to meet this obligation. This includes information not related to certification.

(c) Send all reports and requests for approval to the Designated Compliance Officer (see § 1045.801).

(d) Any written information we require you to send to or receive from another company is deemed to be a required record under this section. Such

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records are also deemed to be submissions to EPA. We may require you to send us these records whether or not you are a certificate holder.

### Subpart B—Emission Standards and Related Requirements

#### § 1045.101 What exhaust emission standards and requirements must my engines meet?

(a) You must show that your engines meet the following requirements:

(1) Outboard and personal watercraft engines must meet the exhaust emission standards specified in § 1045.103.

(2) Sterndrive/inboard engines must meet the exhaust emission standards specified in § 1045.105. You may optionally meet these standards earlier than we require, as specified in § 1045.145(b).

(3) Sterndrive/inboard engines must meet the engine-diagnostic requirements in § 1045.110.

(4) All engines must meet the requirements in § 1045.115.

(b) It is important that you read § 1045.145 to determine if there are other interim requirements or interim compliance provisions that apply for a limited time.

#### § 1045.103 What exhaust emission standards must my outboard and personal watercraft engines meet?

(a) Duty-cycle emission standards. Starting in the 2010 model year, exhaust emissions from your outboard and personal watercraft engines may not exceed emission standards as follows:

(1) Measure emissions using the applicable steady-state test procedures described in subpart F of this part.

(2) The exhaust emission standards from the following table apply:

TABLE 1 TO § 1045.103—EMISSION STANDARDS FOR OUTBOARD AND PERSONAL WATERCRAFT ENGINES (g/kW-hr)

Pollutant	Power <sup>1</sup>	Emission standard
HC + NO <sub>x</sub> .....	P ≤ 4.3 kW .....	30.0
	P > 4.3 kW .....	2.1 + 0.09 × (151 + 557/P <sup>0.9</sup> )
CO .....	P ≤ 40 kW .....	500 – 5.0 × P
	P > 40 kW .....	300

<sup>1</sup> Power (P) = maximum engine power for the engine family, in kilowatts (kW).

(3) For engines whose standard depends on maximum engine power, round the calculated HC+NO<sub>x</sub> emission standard to the nearest 0.1 g/kW-hr; round the calculated CO emission standard to the nearest g/kW-hr. Determine maximum engine power for the engine family as described in §1045.140.

(b) *Averaging, banking, and trading.* You may generate or use emission credits under the averaging, banking, and trading (ABT) program described in subpart H of this part for demonstrating compliance with HC+NO<sub>x</sub> emission standards. For CO emissions, you may generate or use emission credits for averaging as described in subpart H of this part, but such credits may not be banked or traded. To generate or use emission credits, you must specify a family emission limit for each pollutant you include in the ABT program for each engine family. These

family emission limits serve as the emission standards for the engine family with respect to all required testing instead of the standards specified in this section. An engine family meets emission standards even if its family emission limit is higher than the standard, as long as you show that the whole averaging set of applicable engine families meets the emission standards using emission credits and the engines within the family meet the family emission limit. The following FEL caps apply:

(1) For engines with maximum engine power at or below 4.3 kW, the maximum value of the family emission limit for HC+NO<sub>x</sub> is 81.0 g/kW-hr. For all other engines, the maximum value of the family emission limit for HC+NO<sub>x</sub> is defined by the following formula, with results rounded to the nearest 0.1 g/kW-hr:

$$FEL_{\max, HC+NO_x} = 6.0 + 0.25 \cdot \left( 151 + \frac{557}{P^{0.9}} \right)$$

(2) For engines with maximum engine power above 40 kW, the maximum value of the family emission limit for CO is 450 g/kW-hr. For all other engines, the maximum value is defined by the following formula, with results rounded to the nearest g/kW-hr:

$$FEL_{\max, CO} = 650 - 5.0 \times P$$

(c) *Not-to-exceed emission standards.* Exhaust emissions may not exceed the not-to-exceed standards specified in §1045.107.

(d) *Fuel types.* The exhaust emission standards in this section apply for engines using the fuel type on which the engines in the engine family are designed to operate. You must meet the numerical emission standards for hydrocarbons in this section based on the following types of hydrocarbon emissions for engines powered by the following fuels:

- (1) Alcohol-fueled engines: THCE emissions.
- (2) Natural gas-fueled engines: NMHC emissions.
- (3) Other engines: THC emissions.

(e) *Useful life.* Your engines must meet the exhaust emission standards in paragraphs (a) through (c) of this section over the full useful life as follows:

(1) For outboard engines, the minimum useful life is 350 hours of engine operation or 10 years, whichever comes first.

(2) For personal watercraft engines, the minimum useful life is 350 hours of engine operation or 5 years, whichever comes first.

(3) You must specify a longer useful life in terms of hours for the engine family if the average service life of your vehicles is longer than the minimum value, as follows:

(i) Except as allowed by paragraph (e)(3)(ii) of this section, your useful life (in hours) may not be less than either of the following:

(A) Your projected operating life from advertisements or other marketing materials for any engines in the engine family.

(B) Your basic mechanical warranty for any engines in the engine family.

(ii) Your useful life may be based on the average service life of vehicles in the engine family if you show that the average service life is less than the useful life required by paragraph (e)(3)(i) of this section, but more than the minimum useful life (350 hours of engine operation). In determining the actual average service life of vehicles in an engine family, we will consider all available information and analyses. Survey data is allowed but not required to make this showing.

(f) *Applicability for testing.* The duty-cycle emission standards in this subpart apply to all testing performed according to the procedures in §1045.505, including certification, production-line, and in-use testing. The not-to-exceed standards apply for all testing performed according to the procedures of subpart F of this part.

[73 FR 59194, Oct. 8, 2008, as amended at 75 FR 23019, Apr. 30, 2010]

**§ 1045.105 What exhaust emission standards must my sterndrive/in-board engines meet?**

(a) *Duty-cycle emission standards.* Starting in the 2010 model year, exhaust emissions from your sterndrive/inboard engines may not exceed emission standards as follows:

(1) Measure emissions using the applicable steady-state test procedures described in subpart F of this part.

(2) For conventional sterndrive/inboard engines, the HC+NO<sub>x</sub> emission standard is 5.0 g/kW-hr and the CO emission standard is 75.0 g/kW-hr.

(3) The exhaust emission standards from the following table apply for high-performance engines:

TABLE 1 TO § 1045.105—EMISSION STANDARDS FOR HIGH-PERFORMANCE ENGINES (g/kW-hr)

Model year	Power <sup>1</sup>	HC+NO <sub>x</sub>	CO
2010 .....	P≤ 485 kW ....	20.0	350
	P> 485 kW ....	25.0	350
2011+ .....	P≤ 485 kW ....	16.0	350
	P> 485 kW ....	22.0	350

<sup>1</sup> Power (P) = maximum engine power in kilowatts (kW).

(b) *Averaging, banking, and trading.* You may not generate or use emission credits for high-performance engines. You may generate or use emission credits under the averaging, banking, and trading (ABT) program described

in subpart H of this part for demonstrating compliance with HC+NO<sub>x</sub> and CO emission standards for conventional sterndrive-inboard engines. To generate or use emission credits, you must specify a family emission limit for each pollutant you include in the ABT program for each engine family. These family emission limits serve as the emission standards for the engine family with respect to all required testing instead of the standards specified in this section. An engine family meets emission standards even if its family emission limit is higher than the standard, as long as you show that the whole averaging set of applicable engine families meets the emission standards using emission credits and the engines within the family meet the family emission limit. Family emission limits for conventional sterndrive/inboard engines may not be higher than 16.0 g/kW-hr for HC+NO<sub>x</sub> and 150 g/kW-hr for CO except as specified in §1045.145(c).

(c) *Not-to-exceed emission standards.* Exhaust emissions may not exceed the not-to-exceed standards specified in §1045.107 for conventional sterndrive/inboard engines. These standards do not apply for high-performance engines.

(d) *Fuel types.* The exhaust emission standards in this section apply for engines using the fuel type on which the engines in the engine family are designed to operate. You must meet the numerical emission standards for hydrocarbons in this section based on the following types of hydrocarbon emissions for engines powered by the following fuels:

(1) Alcohol-fueled engines: THCE emissions.

(2) Natural gas-fueled engines: NMHC emissions.

(3) Other engines: THC emissions.

(e) *Useful life.* Your engines must meet the exhaust emission standards in paragraphs (a) through (c) of this section over their full useful life, as follows:

(1) For high-performance engines with maximum engine power above 485 kW, the useful life is 50 hours of operation or 1 year, whichever comes first. For high-performance engines with maximum engine power at or below 485